Amendments to the Claims

Please amend Claims 42, 48, and 49. Please add Claims 55-61. The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

1-41. (Cancelled)

42. (Currently Amended) A method for managing a signal, comprising:

searching for a pilot tone by scanning a frequency range in predetermined frequency steps;

recovering a pilot tone sub-symbol;

adjusting a frequency offset between the pilot tone and a clock signal to be within a predetermined frequency range as a function of ~~calculating~~ a parameter value difference between the pilot tone sub-symbol and a consecutive pilot tone sub-symbol; and

adjusting ~~a~~ the clock signal phase and frequency depending on the parameter value difference to lock on a phase and frequency of the pilot tone.

43. (Previously Presented) The method of Claim 42, wherein recovering the pilot tone sub-symbol comprises adjusting the clock signal frequency so that the pilot tone sub-symbol can be received.

44. (Previously Presented) The method of Claim 42, further comprising identifying the pilot tone sub-symbol.

45. (Previously Presented) The method of Claim 44, wherein identifying the pilot tone sub-symbol comprises scanning a plurality of bins to locate a bin containing the pilot tone sub-symbol.

46. (Previously Presented) The method of Claim 42, wherein the parameter comprises phase.

47. (Previously Presented) The method of Claim 42, further comprising using the clock signal frequency for phase locked loop processing.

48. (Currently Amended) An apparatus for managing a signal, comprising:

a search unit to search for a pilot tone by scanning a frequency range in predetermined frequency steps;

a clock source that recovers a pilot tone sub-symbol;

a ~~calculator~~ first adjustment module arranged to adjust a frequency offset between the pilot tone and a clock signal to be within a predetermined frequency range as a function of a parameter value difference between the pilot tone sub-symbol and a consecutive pilot tone sub-symbol; and

~~an adjustor~~ a second adjustment module to adjust ~~of~~ a signal frequency of the clock source depending on the parameter value difference to lock on a phase and frequency of the clock signal to a phase and frequency of the pilot tone.

49. (Currently Amended) The apparatus of Claim 48, wherein the clock signal source is a voltage controlled oscillator.

50. (Previously Presented) The apparatus of Claim 48, further comprising an identifier of the pilot tone sub-symbol.

51. (Previously Presented) The apparatus of Claim 48, wherein the parameter comprises phase.

52. (Previously Presented) The apparatus of Claim 48, further comprising a phase locked loop processor that processes based on the signal frequency.

53. (Previously Presented) The method of Claim 42 further including locking on the phase and frequency of the pilot tone as a function of adjusting a voltage controlled oscillator using a phase locked loop.

54. (Previously Presented) The apparatus of Claim 48 further including a locking module arranged to lock on the phase and frequency of the pilot tone as a function of adjusting a voltage controlled oscillator using a phase locked loop.

55. (New) A computer readable medium having computer readable program codes embodied therein for managing a signal, the computer readable medium program codes including instructions that, when executed by a processor, cause the processor to:

search for a pilot tone by scanning a frequency range in predetermined frequency steps;

recover a pilot tone sub-symbol;

adjust a frequency offset between the pilot tone and a clock signal to be within a predetermined frequency range as a function of a parameter value difference between the pilot tone sub-symbol and a consecutive pilot tone sub-symbol; and

adjust the clock signal phase and frequency depending on the parameter value difference to lock on a phase and frequency of the pilot tone.

56. (New) The computer readable medium of Claim 55 wherein the instructions cause the processor to recover the pilot tone sub-symbol as a function of adjusting the clock signal frequency so that the pilot tone sub-symbol can be received.

57. (New) The computer readable medium of Claim 55 wherein the instructions cause the processor to identify the pilot tone sub-symbol.

58. (New) The computer readable medium of Claim 55 wherein the instructions cause the processor to identify the pilot tone sub-symbol as a function of scanning a plurality of bins to locate a bin containing the pilot tone sub-symbol.

59. (New) The computer readable medium of Claim 55 wherein the parameter comprises phase.

60. (New) The computer readable medium of Claim 55 wherein the instructions cause the processor to use the clock signal frequency for phase locked loop processing.

61. (New) The computer readable medium of Claim 55 wherein the instructions cause the processor to lock on the phase and frequency of the pilot tone as a function of adjusting a voltage controlled oscillator using a phase locked loop.